REMARKS

Reconsideration and allowance of this application is respectfully requested. Claims 1-75 remain pending, of which claims 12-24, 47-59 and 72 are withdrawn from consideration, and claims 7, 8, 27, 31, 42, 43, 64 and 65 have been indicated as allowable.

Applicant has amended claims 1, 5, 25, 33, 36, 60, 61 and 68 to clarify to the previously recited subject matter. Support for the changes to claims 1, 25, 33, 36, 60, 61 and 68 may be found in the specification at, for example, page 7, line 32 through page 8, line 18. In addition, Applicant notes that the previous Amendment failed to include underlining indicating a change made in claim 71. Accordingly, by this Amendment, claim 71 has been amended to indicate the change.

<u>Objection and Rejection of Claim 5 Under
35 U.S.C. § 112, Second Paragraph</u>

Applicant has amended claim 5 to address the issues raised by the Examiner. (Office Action, pp. 2-3, ¶¶ 2-4.) Applicant therefore respectfully requests that the objection and the rejection under Section 112 of claim 5 be withdrawn.

<u>Rejection of Claims 1, 3-6, 25, 26, 29, 30, 36, 38-41 and 60-63
Under 35 U.S.C. § 102(e)</u>

Applicant traverses the rejection of claims 1, 3-6, 25, 26, 29, 30, 36, 38-41 and 60-63 under 35 U.S.C. § 102(e) as allegedly being anticipated by U.S. Patent 6,219,464 to *Greggain et al.* ("*Greggain*"). Present claim 1 recites, *inter alia*, "An apparatus for enhancing the quality of a reproduced image comprised of <u>a plurality of pixels having original pixel values corresponding to the image</u>, the apparatus comprising: a vertical area existence determination unit which determines whether or not an edge included in <u>an input pixel selected from the plurality of pixels</u> belongs to a vertical area ... and an interpolation unit which calculates <u>an interpolated pixel value for the input pixel</u>" (emphasis added).

In the Office Action, the Examiner apparently maintains that the upsampled target pixel disclosed by *Greggain* corresponds to Applicant's claimed "input pixel." (Office Action,

p. 5.) The upsampled target pixel is generated between pixels of an original digital data array to "fill" in pixels of the enlarged image. (*Greggain*, cols. 1:9-29; 2:6-13, 4:61-64.) However, the target pixel is not one of the "pixels having original pixel values corresponding to the image," as recited in claim 1, from which the enlarged image is formed and does not have a pixel value. (*Id.*) As such, the target pixel cannot be considered to correspond to Applicant's claimed "input pixel selected from the plurality of pixels" wherein "a reproduced image comprised of a plurality of pixels having corresponding original pixel values."

The Examiner argues that, because the generated target pixel is interpolated, it could be considered to correspond to the "input pixel" having an "an interpolated pixel value," as previously recited in claim 1.[1] However, as presently claimed, the "input pixel" has an "original pixel value" and an "an interpolation unit … calculates an interpolated pixel value for the input pixel." *Greggain* does not disclose a target pixel having an "original pixel value" and an "interpolated pixel value," as recited in Applicant's claim 1.

Because *Greggain* does not disclose Applicant's claimed "input pixel," it cannot support a rejection of claim 1 under 35 U.S.C. § 102(b). Claim 1 is, therefore, allowable over *Greggain*.

Independent claims 25, 36, 60, and 68, although of different scope than claim 1, recite subject matter similar to that recited in claim 1. Accordingly, claims 25, 36, 60 and 68 are allowable over *Greggain* for similar reasons to those set forth above with regard to claim 1.

Claims 3-6, 26, 30, 38-41 and 61-63 are allowable at least due to their corresponding dependence from claims 1, 25, 36, 60 and 68.

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[1] The Examiner states Applicant's "input should instead be referred to as the target pixel." Applicant does not subscribe to the Examiner's characterization and redefinition of the claimed "input pixel".

<u>Rejections of Claims 71, 73 and 74
Under 35 U.S.C. § 103(a)</u>

Applicant traverses the rejection of claims 71, 73 and 74 under 35 U.S.C. § 103(a) as being unpatentable over *Greggain* because the reference fails to disclose or suggest every feature recited in Applicant's claims. In particular, claims 71, 73 and 74 include the subject matter of claims 36, 60 and 61, respectively. As already noted above, *Greggain* fails to disclose or suggest, at least, an "input pixel," as recited in claims 36, 60 and 61. Thus, *Greggain* also does not disclose the same feature of claims 71, 73 and 74. Accordingly, *Greggain* cannot support a rejection of claims 71, 73 and 74 under 35 U.S.C. § 103(a).

<u>Rejections of Claims 10, 33, 45, 68 and 75
Under 35 U.S.C. § 103(a)</u>

Applicant traverses the rejection of claims 71, 73 and 74 under 35 U.S.C. § 103(a) as allegedly not patentable over the purported combination of *Greggain, Ma* and *Westerman.* As noted above with regard to claim 1, *Greggain* fails to disclose or suggest Applicant's claimed "input pixel." *Ma* and *Westerman* also do not appear to disclose the claimed "input pixel" (*see, e.g., Ma*, FIGs. 1A-AC; *Westerman*, FIGs. 3-5). Accordingly, the applied references, when taken individually or in combination, cannot support a rejection of claim 10 under 35 U.S.C. § 103(a).

Claims 33, 45, 68 and 75 recite limitations similar to those recited in claim 10. Accordingly, the applied reference cannot support a rejection of claims 33, 45, 68 and 75 for similar reasons as those provided above with regard to claim 10.

<u>Rejections of Claims 2, 11, 37 and 46
Under 35 U.S.C. § 103(a)</u>

Applicant traverses the rejection of claim 2 under 35 U.S.C. § 103(a) as allegedly not patentable over the purported combination of *Greggain* and *Takeda.* Claim 2 depends from claim 1 and, therefore, includes all the limitations of claim 1. Accordingly, *Greggain* also fails to disclose or suggest the "input pixel" in claim 2. *Takeda* does not overcome the

deficiencies of *Greggain.* *Takeda* discloses a system for converting non-interlaced images into interlaced images. (*Takeda*, col. 1:19-23.) The Examiner relies on *Takeda* for its alleged disclosure of comparing a pixel of a previous scan line with an interpolated pixel. (Office Action, p. 13:9-11.) To the contrary, *Takeda* performs an interpolation based on a comparison of scan lines, wherein a <u>current</u> scan line is compared with a <u>previous</u> scan line. (*Takeda*, col. 3:60-4:7.) *Takeda*, however, says nothing with regard to "compar[ing] the <u>interpolated</u> pixel value with an <u>original</u> input pixel value," as recited in Applicant's claim 2. Thus, claim 2 is allowable over the purported combination of *Greggain* and *Takeda*. Claim 11 is also allowable at least due to its dependence from claim 2.

Claims 37 and 46 recite limitations similar to those recited in claim 2 and 11, respectively. Accordingly, the applied reference cannot support a rejection of claims 37 and 46 for similar reasons as those provided above with regard to claims 2 and 11.

<u>Rejections of Claims 34, 35, 69 and 70
Under 35 U.S.C. § 103(a)</u>

As noted above, *Greggain, Ma, Westerman,* and *Takeda* fail to teach or suggest the features recited in claims 2 and 10. Accordingly, the purported combination of *Greggain, Ma, Westerman,* and *Takeda*, taken individually or in combination, also fail to teach or suggest the similar features include in claims 34, 35, 69 and 70. Thus, the cited references cannot support a rejection of claims 34, 35, 69 and 70 under Section 103(a) for similar reasons to those set forth above with regard to claims 2 and 10.

<u>Rejections of Claims 9, 28, 32, 44, 66 and 67
Under 35 U.S.C. § 103(a)</u>

Applicant traverses the rejection of claim 9 under 35 U.S.C. 103(a) as allegedly not being patentable over *Greggain* in view of *Yoo* (US 2003/0112369). Claim 9 depends from claim 1 and, therefore, includes all the limitations of claim 1. Accordingly, *Greggain* also fails to disclose or suggest the "input pixel" in claim 9. *Yoo* is relied on for purported teaching of "compar[ing] the directional differences to a threshold value (TH_VAL) and if the

values are less than the threshold then the chosen leftward/rightward (positive/negative slope) directionality are considered imprecise at which point a reevaluation of the directionality is performed." (Office Action, dated July 25, 2007, p. 15.) However, *Yoo* does appear not to disclose the claimed "input pixel." Accordingly, when taken individually or in combination, the purported combination of *Greggain* and *Yoo* cannot support a rejection of claim 9 under 35 U.S.C. § 103(a).

Claims 28, 32, 44, 66 and 67 recite limitations similar to those recited in claim 10. Accordingly, the applied reference cannot support a rejection of claims 28, 32, 44, 66 and 67 for similar reasons as those provided above with regard to claim 9.

Conclusion

For the reasons set forth above, Applicant respectfully requests allowance of the pending claims.

If additional fees are required for any reason, please charge Deposit Account No. 02-4800 the necessary amount.

Respectfully submitted,

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